

MSc thesis subject:

Re-introduction potential of peat mosses (*Sphagnum* spp) for peatland restoration

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Ecosystem restoration does not always result in spontaneous recovery of the original floristic diversity. This can be due to several non-exclusive reasons that restrict the establishment of the target plant community, such as unsuitable abiotic conditions and/or dispersal limitation. The latter bottleneck, however, can be overcome by manual species (re)introductions.

In this MSc project, you will investigate the re-introduction potential of various peat moss species (*Sphagnum* spp.) across different peatland types. Several species of peat mosses will be collected from donor sites, fragmented, and then spread over experimental receptor sites. You will then follow establishment success of the mosses during one growing season, which you will link to soil abiotic parameters such as nutrient availability and pH as well as to existing plant communities. You will answer the question whether abiotic parameters are predictors of establishment success of different *Sphagnum*, and if yes, which parameters.

In addition, novel work will be done on the soil-plant microbiome as well, in which we will investigate whether *Sphagnum*-specific microbes are also transplanted together with their host, and whether these microbes persist after transplantation or whether they are eventually taken over by the microbiome of the receptor soil.

What you need to know:

- Most field work will be done throughout April-August 2025 (days will be scattered, not full working weeks). Lab work for soil chemistry/microbiology can be done in autumn.
- Field work will be done at 2 or 3 main sites, of which -at least- “De Zegge” in Geel and “Vorsdonkbos” near Aarschot. You need to reach these field sites on your own account.
- Interest in vegetation, habitat conservation and restoration, community ecology,...
- Molecular lab experience (i.e. working with DNA) is not a requirement, as long as the student is eager to learn

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